

Table 2-H-16
Sacramento to Bakersfield – High-Speed Train Alignment Evaluation Matrix
Tulare to Bakersfield Alignment

Alignment = Alignment Carried Forward

Alignment = Alignment Eliminated

Alignment = Primary or Secondary Reason for Elimination

Evaluation Criteria	BNSF (Hanford to Bakersfield Truxton)	UPRR (Visalia Airport to Bakersfield Golden State)	E99 (Tulare East County to Bakersfield Golden State)	W99 (Tulare West County to Bakersfield Golden State)
<i>Maximize Ridership/Revenue Potential.</i>				
Travel Time	VHS 25.7 minutes	VHS 22.3 minutes	VHS 22.4 minutes	VHS 22.5 minutes
	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Length	81.70 miles 131.48 km	69.23 miles 111.41 km	69.73 miles 112.22 km	70.06 miles 112.75 km
	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Population/Employment Catchment	Not Applicable	Not Applicable	Not Applicable	Not Applicable
<i>Maximize Connectivity and Accessibility.</i>				
Intermodal Connections	Not Applicable	Not Applicable	Not Applicable	Not Applicable
<i>Minimize Operating and Capital Costs.</i>				
Length	BNSF ROW	UP ROW	E99 and UP ROW	UP and new ROW
	3	3	3	3
Operational Issues	BNSF coordination	UP coordination	UP coordination	UP coordination
	3	3	3	3
Construction Issues	BNSF ROW	UP ROW Bakersfield downtown	UP ROW Bakersfield suburbs	UP ROW
	3	2	3	3

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Capital Cost	High cost BN right of way	High cost UP right of way	Moderate costs	Moderate to high costs
	3	2	4	4
Right-of-Way Issues/Cost	BNSF ROW	UP ROW Bakersfield downtown	UP ROW Bakersfield suburbs	UP ROW
	3	2	3	3
<i>Maximize Compatibility with Existing and Planned Development.</i>				
Land Use Compatibility and Conflicts				
Percent of Conflicting Existing Land Uses within adjacent buffers (Residences, Institutions, Recreation, Parks, and Open Space)	11.62	12.73	4.70	8.01
	3	3	5	4
Visual Quality Impacts				
Scenic Corridor and River Crossings	0.00	0.00	1.00	0.00
	5	5	4	5
<i>Minimize Impacts on Natural Resources.</i>				
Water Resources Impacts				
Number of Natural Stream/Lake Crossings (linear ft)	9.00 (450)	8.00 (400)	9.00 (450)	12.00 (600)
Number of Wetland Crossings	25.00	26.00	15.00	21.00
Total Acreage of Wetlands Within ROW	45.50	7.35	8.92	30.93
	1	3	4	2
Floodplain Impacts				
Number of FEMA Floodplain Crossings	11.00	8.00	12.00	10.00
Associated Length (meters) of Floodplain Crossings	19851.62	34332.27	19403.64	22835.27
Total Acreage of FEMA Floodplain Crossings	152.31	226.41	145.50	169.89
	5	2	5	4

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Threatened & Endangered Species Impacts				
Count of Species w/in ROW	28.00	23.00	6.00	16.00
Count of Species along ROW	1.00	1.00	1.00	0.00
Sensitive Habitat Acreage w/in ROW	26.49	2.51	4.96	20.15
Net Sensitive Habitat Acreage along ROW	101.26	18.20	25.53	71.03
	2	5	5	3
<i>Minimize Impacts on Social and Economic Resources.</i>				
Environmental Justice Impacts (Demographics)				
Minority Within 1,400' Buffer – 1990 Population	24023.00	35551.00	3843.00	11609.00
Low Income Within 1,400' Buffer – 1990 Households	0.00	0.00	0.00	0.00
	3	2	5	5
Farmland Impacts	*Low severance impacts along existing BNSF alignment		*High severance impacts with "new" corridor	*High severance impacts with "new" corridor
Total Acreage of Important Farmlands Within ROW (Prime, Unique, and Statewide Importance)	433.88	166.21	252.83	262.88
	2	5	4	4
<i>Minimize Impacts on Cultural Resources.</i>				
Cultural Resources Impacts				
Number of National Register Resources Within ROW	1.00	0.00	0.00	0.00
Number of National Register Resources along ROW	0.00	0.00	0.00	0.00
	4	5	5	5

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Parks & Recreation/Wildlife Refuge Impacts				
Total Acreage Parks/Recreation Areas in ROW	1.98	10.06	0.80	6.95
Total Acreage of Parks/Recreation Areas along ROW	15.08	69.09	5.09	23.56
Incidences of Parks/Recreation Areas in ROW	3.00	3.00	2.00	3.00
Incidences of Parks/Recreation Areas along ROW	1.00	0.00	0.00	0.00
	4	1	5	4
<i>Maximize Avoidance of Areas with Geologic and Soils Constraints.</i>				
Soils/Slope Constraints				
Not a Distinguishing Factor				
Seismic Constraints				
Not a Distinguishing Factor				
<i>Maximize Avoidance of Areas with Potential Hazardous Materials.</i>				
Hazardous Materials/Waste Constraints				
Not a Distinguishing Factor				

1 2 3 4 5
Least Favorable Most Favorable